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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,464	10/07/2003	Kenneth Kay Smith	200205516-1	5180
22879	7590	07/08/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			NGUYEN, THINH T	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/680,464

Applicant(s)

SMITH ET AL.

Examiner

Thinh T. Nguyen

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 18-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 18-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED OFFICE ACTION

1. In response to Applicant Communication with the Office on 6/27/2005 the species restriction requirement issued by the Office Action on 6/25/2005 is withdrawn.
2. Claims 1-12, 18-37 are pending in the application.

Specification

3. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant cooperation is requested in correcting any errors of which the applicant may become aware in the specification.

Claim Objections

4. Claim 5 is objected to under CFR 1.75© as being an improper dependent claim that fails to further limit the claim it depend on. Applicant is required to cancel the claim or rewrite the claim to put it under the proper dependant form. Reciting a **second cross section area is similar to the second cross section area** does not further limit the structure of the device since a cross section area is always similar and equal to itself.

Correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(a/b/e) that form the basis for the rejections under this section made in this office action.

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1- 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hidaka (U.S. Patent 6,349,054).

REGARDING CLAIM 1,2,3

Hidata discloses (in column 36 lines 60-67,fig 25) a magnetic memory comprising: a first line (the write word line WWL) having a first cross-sectional area; a second line (the Bit Line BL) having a second cross-sectional area different than the first cross-sectional area; and a magnetic memory cell stack positioned between the first line and the second line and wherein the first cross section area is larger than the second cross section.

7. Claim 9 –12,18-19, 25-33, 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Durlam et al. (US patent 6,211,090).

REGARDING CLAIM 9

Durlam (fig 9) discloses a magnetic memory comprising: a magnetic memory cell stack; a magnetic memory line for carrying a current, located adjacent the magnetic memory cell stack, the magnetic memory line (fig 9 line 46) including a first region with a first width and a second region with a second width smaller than the first width.

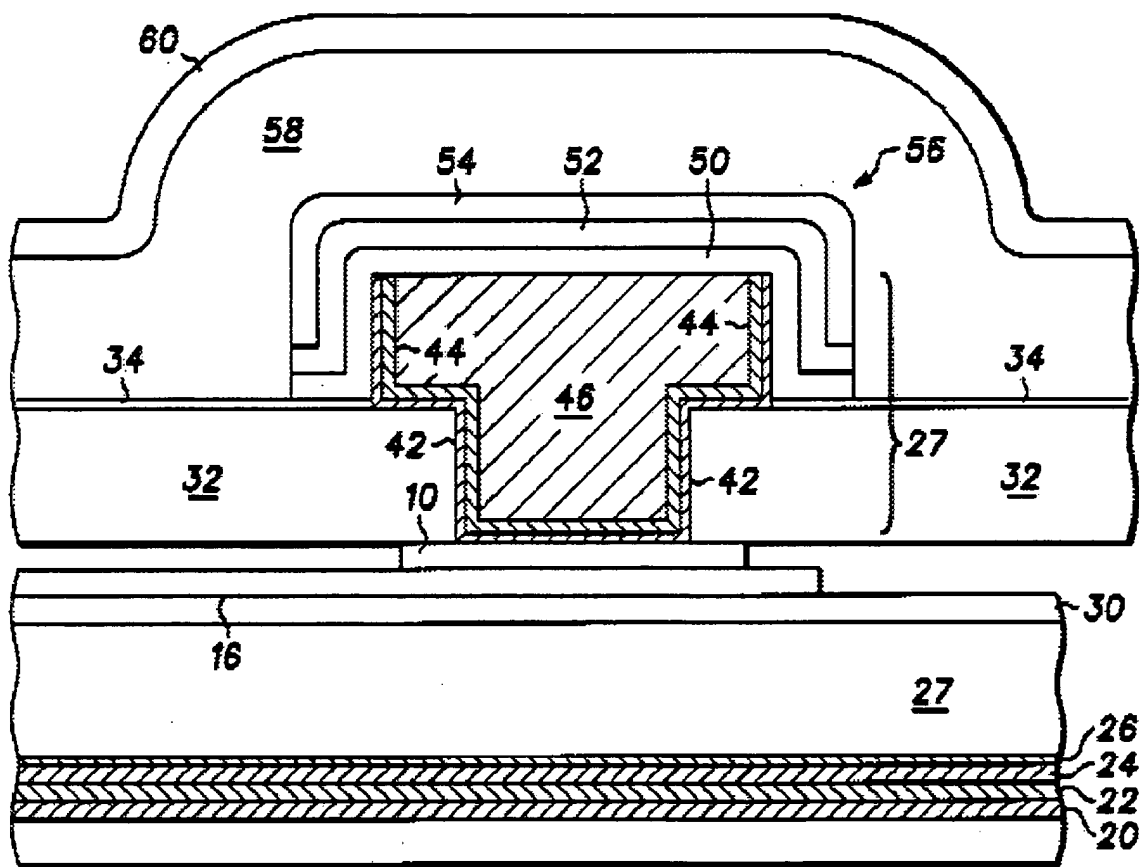


FIG. 9

REGARDING CLAIM 10,11

Durlam (the abstract, fig 9) discloses a magnetic memory comprising: a magnetic memory cell stack wherein the magnetic memory line (fig 9 line 46) includes at least a partial outer layer for (the abstract, fig 9 layer 52) localizing a magnetic field at the magnetic memory cell stack and this layer is a cladding layer.

REGARDING CLAIM 12

Durlam (fig 9) discloses a magnetic memory wherein the magnetic memory line, including the first section and the second section, is substantially T-shaped.

REGARDING CLAIM 18

Durlam (fig 9) discloses a magnetic memory cell, comprising: a first line (fig 9 line 46) having a first width and a second width, where the first width is greater than the second width; and a memory cell stack having a first side adjacent the first line along the second width.

REGARDING CLAIM 19

Durlam Discloses (fig 9 line 27) a second line adjacent a second side of the memory cell stack.

REGARDING CLAIM 25

Durlam Discloses (fig 9) a magnetic memory cell wherein the second width is the same as a width of the memory cell stack.

REGARDING CLAIM 26,27

Durlam Discloses (fig 9) a magnetic memory cell comprising means for (fig 9 layer 52) localizing and focusing a magnetic field where the magnetic field is localized around the first line and focused into the memory cell stack and cladding around the first line and away from

between the first line and the memory cell stack.

REGARDING CLAIM 28

Durlam Discloses (fig 9) a magnetic memory cell wherein the first line is a T -shaped conductor.

REGARDING CLAIM 29,30

Durlam Discloses (fig 9) a magnetic memory device, comprising: an array of magnetic memory cells; and first lines crossing the array of magnetic memory cells; the first lines having a first section and a second section, where the first section is wider than the second section and wherein the first section is separated from the array of magnetic memory cells by the second section.

REGARDING CLAIM 31

Durlam Discloses (fig 9) a magnetic memory device, comprising means for localizing and focusing a magnetic field,(fig 9 layer 52) where the magnetic field is localized around each first line and focused into the array of magnetic memory cells.

REGARDING CLAIM 32

Since Durlam discloses an array of similar MRAM cell on a same substrate, the first section of one first line is inherently in substantially the same plane as the first section of an adjacent first line.

REGARDING CLAIM 33

Durlam Discloses (fig 9) a magnetic memory device wherein the first section has a rectangular face and the second section has a rectangular face, the rectangular face of the first section and the rectangular face of the second section forming a T shape.

REGARDING CLAIM 35,36

Durlam Discloses (fig 9) a magnetic memory device comprising second lines crossing the array of magnetic memory cells and wherein the first lines and the second lines are orthogonal.

Claim Rejections - 35 USC § 103

8. The following is a quotation of U.S.C. 103(a) which form the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-8, 20-24,34,37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durlam et al. (U.S. patent 6,211,090) in view of further remark.

REGARDING CLAIM 4-8

To expedite the prosecution of the case, the Examiner assume that the applicant will amend claim 5 to overcome the objection to claim 5.

Durlam discloses all the invention of claims 4-8 except for the limitations that the second cross section area is smaller than the first area cross-section.

This feature, however, is considered obvious since it has been held that when all the general conditions of a claim are disclosed in the prior art, discovering the optimum value or workable range is within the level of ordinary skill in the art.

REGARDING CLAIM 20-24,34,37

These inventions are considered obvious over Durlam reference since Durlam discloses all the inventions except for the duplication of the essential working parts of the device or the rearrangement of parts and these features are considered routine skill for one of ordinary skill in the art.

10. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

11. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

CONCLUSION

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose telephone number is 571-272-1790. The examiner can normally be reached on Monday-Friday 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached at 571-272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval [PAIR] system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thinh T. Nguyen *TTN*

Art Unit 2818


David Nelms
Supervisory Patent Examiner
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